

Occasionally flowers are also found showing a tendency to become bisporangiate.—J. M. C.

Physiology of parasitism.—BROWN¹⁹ has begun a much needed investigation of the physiological relation of host and parasite, his first paper dealing with *Botrytis cinerea*. From the germ tubes of this fungus he succeeded in obtaining a very powerful extract, whose action on cell walls results in the disintegration of tissue, and whose action on the protoplasts produces death. This extract loses its "lethal power" by heating, by mechanical agitation, and by neutralization with an alkali. Neither oxalic acid nor oxalates are accountable for the toxicity of the extract, which the author concludes must be due to the presence of a substance of colloidal nature. The only active substance discovered was an enzyme which was thought to be responsible for the lethal action of the extract. The multiplication of such investigations will result in some progress in knowledge as to the nature of immunity and susceptibility.—J. M. C.

Morphology of *Ephedra helvetica*.—In a thesis presented for the doctorate of science at the University of Geneva, SIGRIANSKI²⁰ has reviewed and re-investigated *Ephedra helvetica*. Two new facts are reported. The hypodermal archesporial cell does not divide periclinally and give rise to a primary wall cell. By division of the cells of the epidermis the hypodermal initial is placed deeply within the nucellus. The figures which illustrate this situation will not entirely satisfy a critical investigator. A second and most important fact is that the four megaspores are all functional, the wall of the megaspore mother cell being the embryo sac wall, as in *Lilium* and some other angiosperms. It would be most interesting to know with certainty whether *Welwitschia* and *Gnetum* have attained the *Lilium* level in this respect.—W. J. G. LAND.

Jurassic wood.—Miss HOLDEN²¹ has described a new species of *Metacetroxylon* from the Jurassic of Scotland, under the name of *M. scoticum*. It is a good illustration of the merging of araucarian and abietinean characters during the Jurassic, since it is araucarian in the pitting of the tracheids, and abietinean in the pitting of the rays. It differs from *M. araucarioides* only in the absence of pits on the tangential walls of the tracheids and in the biseriate character of the rays.—J. M. C.

¹⁹ BROWN, WILLIAM, Studies in the physiology of parasitism. *Ann. Botany* 29: 313-348. 1915.

²⁰ SIGRIANSKI, ALEXANDRE, Quelques observations sur l'*Ephedra helvetica* Mey. pp. 62. *figs.* 74. Geneva. 1913.

²¹ HOLDEN, RUTH, A Jurassic wood from Scotland. *New Phytol.* 14:205-209. *pl.* 3. 1915.